

CLAIMS

1. A power generating electronic timepiece which operates using a power supply device as an energy source, said power supply device comprising at least power generating means, said power generating electronic timepiece comprising:

5 a time measuring circuit for measuring or calculating predetermined information and outputting the resulting information;

display means for displaying time information or function information based on a signal output from said time measuring circuit; and

control means for controlling states of said power generating electronic timepiece

10 such that when the amount of power generated by said power generating means is detected to be at a first power generation level, the state is changed from first state before detection to a second state which is different from said first state, and when the amount of power generated by said power generating means is detected to be at a second power generation level, the state is changed from said second state to said first state, said second power generation level being
15 different from said first power generation level.

2. A power generating electronic timepiece according to claim 1, wherein said power supply device comprises power generating means and electricity storage means to which power generated by said power generating means is charged.

20 3. A power generating electronic timepiece according to claim 1 comprising control means for controlling states of said power generating electronic timepiece such that when the amount of power generated by said power generating means is detected to be at a first power generation level, the state is changed from said first state before detection to a second state
25 which is different from said first state, and when the amount of power generated by said power generating means is detected to be at a level equal to or higher than a second power generation level, the state is changed from said second state to said first state, and said

second power generation level being higher than said first power generation level.

4. A power generating electronic timepiece according to claim 3, wherein when the amount of generated power of said power generating means is at said first power generation level, it is determined that power is not being generated, and when the amount of generated power of said power generating means is at said second power generation level, it is determined that power is generated.

5. A power generating electronic timepiece according to claim 3 comprising control means for controlling the state of said timepiece such that when it is detected that the amount of power generated by the power generating means is transitioned from a level greater than a first power generation level to a level equal to or less than said first power generation level, the state of said power generating electronic timepiece is switched from a first state to a second state which has smaller power consumption than said first state, and when it is detected that the amount of power generated is transitioned from a level less than said second power generation level, which is higher than said first power generation level, to a level equal to or greater than the second power generation level, the state of said power generating electronic timepiece is switched from said second operation state to said first operation state.

6. A power generating electronic timepiece according to claim 1, wherein as said first power generation level and said second power generation level, a detection value can be selected from among a plurality of detection values for respective power generation levels.

7. A power generating electronic timepiece according to claim 6, wherein an arbitrary optimal value is selected from among said plurality of detection values respectively for said first power generation level and said second power generation level based on the charge capacity of said electricity storage means.

8. A power generating electronic timepiece according to claim 6, wherein an arbitrary optimal value is selected from among said plurality of detection values respectively for said first power generation level and said second power generation level based on the temperature of the environment in which said power generating electronic timepiece is placed.

5

9. A power generating electronic timepiece according to claim 1, wherein said control means determines that power non-generation is detected when said first power generation level is repeatedly detected within a predetermined time period.

10 10. A power generating electronic timepiece according to either claim 1 or claim 9, wherein said control means determines that power generation is detected when said second power generation level is repeatedly detected within a predetermined time period.

11. A power generating electronic timepiece according to claim 1, wherein at least a
15 portion of display operations of said display means is suspended in said second state.

12. A power generating electronic timepiece according to claim 1, wherein a portion of operations of said time measuring circuit or of circuits other than said time measuring circuit is suspended in said second state.

20

13. A power generating electronic timepiece according to either claim 11 or claim 12, wherein at least a portion of said display means is comprised by an analog display mechanism or a digital display mechanism.

25 14. A power generating electronic timepiece according to claim 1, wherein a member exhibiting power generation effect when exposed to light energy is used for said power generating means.

15. A method for controlling a power generating electronic timepiece which operates using at least power generating means as an energy source, said method comprising the steps of:

when the detected amount of power generated by said power generating means is at a first power generation level, switching the state of said power generating electronic timepiece from a first state before said detection to a second state different from said first state; and

when the detected amount of power generated by said power generating means is at a second power generation level different from said first power generation level, switching the state of said power generating electronic timepiece from said second state to said first state.

16. A method for controlling a power generating electronic timepiece which operates using at least power generating means as the energy source, said method comprising the steps of:

when the detected amount of power generated by said power generating means is at a level lower than or equal to a first power generation level, switching the state of said power generating electronic timepiece from a first state before said detection to a second state different from said first state; and

when the detected amount of power generated by said power generating means is at a level higher than or equal to a second power generation level different from said first power generation level, switching the state of said power generating electronic timepiece from said second state to said first state.

17. A method for controlling a power generating electronic timepiece which operates using at least power generating means as the energy source, said method comprising the steps of:

when it is detected that the amount of power generated by said power generating means is transitioned from a level greater than a first power generation level to a level lower

or equal to said first power generation level, switching the state of said power generating electronic timepiece to a second state which exhibits less power consumption than at a first state; and

- 5 when it is detected that the amount of power generated by said power generating means is transitioned from a level lower than a second power generation level to a level greater than or equal to said second power generation level, said second power generation level being greater than said first power generation level, switching the state of said power generating electronic timepiece from said second operation state to said first operation state.